

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for preparing thin integrated circuits having multiple circuit layers comprising the following steps:
 - forming a first circuit layer with multiple sections on a substrate;
 - depositing a resin-copper coating on the first circuit layer, the resin-copper coating comprising a resin layer and a copper layer thereon;
 - forming a second circuit layer with multiple sections on the resin-copper coating to serve as a topmost circuit layer on the substrate;
 - electrically connecting the first and second circuit layers;
 - forming a gap to expose a portion of the resin layer between two sections of the second circuit layer;
 - connecting an electronic ~~components~~component to the two sections of the topmost circuit layer adjacent to the gap so as to at least partially cover the exposed portion of the resin layer;
 - applying an encapsulant layer to protect the electronic ~~components~~component;
 - and
 - removing the substrate to expose the first circuit layer after the step of connecting the electronic ~~components~~component to the topmost circuit layer.

2. (Original) The method as claimed in claim 1, wherein multiple dimples are defined in the substrate before the first circuit layer is formed on the substrate including the dimples; whereby the first circuit layer at the dimples become protrusions after the substrate is removed.

3. (Previously Presented) The method as claimed in claim 1, wherein the substrate has a flat top face and the first circuit layer is formed on the flat top face.

4. (Currently Amended) The method as claimed in claim 1, wherein the first and second circuit layers are electronically connected by forming microvias through the resin-copper coating from the first circuit layer to the second circuit layer and;

forming a conductive layer on the second circuit layer into the microvias to connect between the first and second circuit layers.

5. (Currently Amended) The method as claimed in claim 1, wherein the electronic ~~components~~component is disposed on the exposed portion of the resin layer within the gap and are connected to the second circuit layer by bonding metal wires between the electronic ~~components~~component and the second circuit layer.

6. (Currently Amended) The method as claimed in claim 2, wherein the electronic ~~components~~component is disposed on the exposed portion of the resin layer within the gap and are connected to the second circuit layer by bonding metal wires between the electronic ~~components~~component and the second circuit layer.

7. (Currently Amended) The method as claimed in claim 3, wherein the electronic ~~components are~~ component is disposed on the exposed portion of the resin layer within the gap and connected to the second circuit layer by bonding metal wires between the electronic ~~components~~component and the second circuit layer.

8. (Currently Amended) The method as claimed in claim 4, wherein the electronic ~~components are~~ component is disposed on the exposed portion of the resin layer within the gap and connected to the second circuit layer by bonding metal wires between the electronic ~~components~~component and the second circuit layer.

9. (Currently Amended) The method as claimed in claim 1, wherein the electronic ~~components are~~ component is disposed across the gap on the two sections of the second circuit layer and connected to the second circuit layer by soldering tin balls between the electronic components and the second circuit layer.

10. (Currently Amended) The method as claimed in claim 2, wherein the electronic ~~components are~~ component is disposed across the gap on the two sections of the second circuit layer and connected to the second circuit layer by

soldering tin balls between the electronic ~~components~~component and the second circuit layer.

11. (Currently Amended) The method as claimed in claim 3, wherein the electronic ~~components~~ are component is disposed across the gap on the two sections of the second circuit layer and connected to the second circuit layer by soldering tin balls between the electronic ~~components~~component and the second circuit layer.

12. (Currently Amended) The method as claimed in claim 4, wherein the electronic ~~components~~ are component is disposed across the gap on the two sections of the second circuit layer and connected to the second circuit layer by soldering tin balls between the electronic ~~components~~component and the second circuit layer.

13. (Original) The method as claimed in claim 1, wherein multiple isolating layers are respectively applied to adjacent sections of the exposed first circuit layer after the substrate is removed and multiple tin-paste layers are respectively applied to the first circuit layer between adjacent isolating layers.

14. (Original) The method as claimed in claim 2, wherein multiple isolating layers are respectively applied to adjacent sections of the exposed first circuit layer after the substrate is removed and multiple tin-paste layers are respectively applied to the first circuit layer between adjacent isolating layers.

15. (Original) The method as claimed in claim 3, wherein multiple isolating layers are respectively applied to adjacent sections of the exposed first circuit layer after the substrate is removed and multiple tin-paste layers are respectively applied to the first circuit layer between adjacent isolating layers.

16. (Original) The method as claimed in claim 4, wherein multiple isolating layers are respectively applied to adjacent sections of the exposed first circuit layer after the substrate is removed and multiple tin-paste layers are respectively applied to the first circuit layer between adjacent isolating layers.

17. (Previously Presented) The method as claimed in claim 1, wherein the method further comprises the step of forming a third circuit layer on the first circuit layer before forming the topmost circuit layer.

18. (Currently Amended) A method for preparing an integrated circuit having multiple circuit layers comprising the following steps:

forming a first circuit layer on a substrate;

depositing a resin-copper layer on the first circuit layer, the resin-copper layer comprising a resin layer and a copper layer thereon;

forming a second circuit layer on the resin-copper layer to serve as a topmost circuit layer on the substrate;

forming a gap to expose a portion of the resin layer between two sections of the second circuit layer;

disposing ~~embedding~~ an electronic component within the gap and connecting to the two sections of the topmost circuit layer adjacent to the gap;

applying an encapsulant layer to cover the electronic component; and

removing the substrate to expose the first circuit layer after the step of applying the encapsulant layer to cover the electronic component.

19. (Previously presented) The method of Claim 18, wherein the electronic component is embedded in the second circuit layer.

20. (Currently Amended) A method for preparing an integrated circuit having multiple circuit layers comprising the following steps:

forming a first circuit layer on a substrate;

depositing a resin-copper layer on the first circuit layer, the resin-copper layer comprising a resin layer and a copper layer thereon;

forming a second circuit layer on the resin-copper layer to serve as a topmost circuit layer on the substrate;

forming a gap to expose a portion of the resin layer between two sections of the second circuit layer;

disposing ~~bending~~ an electronic component across the gap on the two sections of ~~to~~ the topmost circuit layer;

applying an encapsulant layer to cover the electronic component and all of layers above the first circuit layer; and

removing the substrate to expose the first circuit layer after the step of applying the encapsulant layer, wherein the encapsulant layer replaces the substrate to support the integrated circuit.